What Is Claimed Is:

1. A method for monitoring the exhaust gas recirculation (AR) of an internal combustion engine by pressure sensing, in which exhaust gas is recirculated from an outlet side of a combustion chamber assemblage via an exhaust gas recirculation conduit (ARK) to an inlet side of the combustion chamber assemblage,

    wherein a pressure curve is sensed in at least one combustion chamber (ZYL1 ... ZYLn) and a thermodynamic parameter is ascertained therefrom as an actual value;

    a setpoint value of the parameter, which setpoint value takes into account the current operating point of the internal combustion engine, is made available, and a deviation between setpoint value and actual value is determined; and

    a datum regarding the current exhaust gas recirculation state, as compared with its normal state, is obtained from the deviation.

2. The method as recited in Claim 1,

    wherein a time difference or a crankshaft angle difference (Δa) between a percentage energy conversion point ($a_{EK\%}$) and a reference time or reference angle (a_z) known in the control device (ST) is taken as the basis for the thermodynamic parameter.

3. The method as recited in one of Claims 1 or 2,

    wherein the pressure curve is sensed by sampling at fixed crankshaft angles or time intervals, and the sampled pressure values are stored as a data sequence during at least a portion of one combustion cycle.

4. The method as as recited in one of the preceding claims,

    wherein the thermodynamic parameter is ascertained during at least a portion of one combustion cycle, on the basis of the pressure curve, from a combustion curve in which the total quantity of heat released is calculated, or from a heat curve in which the quantity of heat conveyed to the combustion gas is calculated.

5. The method as recited in Claim 4,

    wherein the heat curve is calculated on the basis of the relationship

    dQh = dU + p*dV,

    where dQh denotes the quantity of heat conveyed, dU the increase in the internal energy of the combustion gas, and p*dV the mechanical work delivered; and

an energy conversion percentage is ascertained from the conveyed quantity of heat dQh by integration over the crankshaft angle.

6. The method as recited in Claim 4 or 5,

wherein the percentage energy conversion point is calculated according to the formula

$Q_i = [n/(n-1)]* p_i * (V_{i+1}-V_{i-1}) * [1/(n-1)] + V_i *(p_{i+1}-p_{i-1})$,

where n denotes the polytropic exponent, p the pressure in the combustion chamber, V the cylinder volume, and i a running index of the sampled and stored cylinder pressure from the beginning to the end of a calculation interval, or from a formula derived from that formula; and

the energy conversion percentage is ascertained by integration of the quantities of heat Q_i over one complete working cycle after determination of the 100% energy conversion, and the crankshaft angle ($a_{E50\%}$) corresponding to the energy conversion percentage is determined therefrom.

7. The method as recited in one of Claims 2 through 6,

wherein the 50% energy conversion point is taken as the basis for the percentage energy conversion point.

8. The method as defined in any of the preceding claims,

wherein the deviation between setpoint value and actual value is compared with a positive and a negative limit value that take into account the tolerances of the parameter calculation and of the setpoint value.

9. The method as recited in one of the existing claims,

wherein the pressure curve is determined directly by way of a sensor arranged in at least one combustion chamber (ZYL1 ... ZYLn), or indirectly.

10. The method as recited in one of the existing claims,

wherein the exhaust gas recirculation data that are ascertained are evaluated in the control device for a fault diagnosis with fault storage and/or fault display, and/or for control purposes, in particular readjustment of an exhaust gas recirculation valve (ARV).